



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/675,479

09/30/2003

Dhirendra Pandey

5681-71800

6011

58467

7590

11/09/2007

MHKKG/SUN

P.O. BOX 398

AUSTIN, TX 78767

EXAMINER

WAI, ERIC CHARLES

ART UNIT

PAPER NUMBER

2195

MAIL DATE

DELIVERY MODE

11/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/675,479

Applicant(s)

PANDEY ET AL.

Examiner

Eric C. Wai

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. Claim 11 recites a "system means"; however, it appears that the system would reasonably be interpreted by one of ordinary skill in the art as software per se, failing to be tangibly embodied or include any recited hardware as part of the system. Software is equivalent means of the claimed system.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5-6, 10-12, 16-17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gigliotti et al. (US Pat No. 6,393,458 hereinafter Gigliotti).

7. Regarding claim 1, Gigliotti teaches a system, comprising:

one or more host machines configured to implement a plurality of instances of an application server (Fig 3, Server 44, wherein there are multiple server hosts 58, 60, 62, 64, and 66);

one or more client computer systems configured to implement one or more clients of the application server (Fig 3, Client 42), wherein each client is configured to:

create a plurality of client-side Object Request Brokers (ORBs), wherein each client-side ORB is coupled to a server-side ORB of a different one of the plurality of application server instances (col 4, lines 30-31, col 5 lines 53-56, Fig 3, wherein each client instance is connected to a server host using ORB);

select one of the plurality of client-side ORBs according to a load balancing scheme in response to a request to access the application server (col 6 lines 37-39, wherein a load balancer determines a balanced distribution); and

access a particular one of the plurality of application server instances via the selected client-side ORB coupled to a server-side ORB of the particular application server instance (col 7 lines 21-24).

8. Gigliotti does explicitly state the existence of client-side and server-side ORBs. However, it would have been obvious to one of ordinary skill in the art, that ORBs exist at both the client and server in order for the ORB protocol to be used.

9. Regarding claim 5, Gigliotti teaches that each client is further configured to:
select a different one of the plurality of client-side ORBs according to the load balancing scheme in response to another request to access the application server (col 6 lines 37-56, wherein the load balancer chooses a different server host to process the request); and
access a different one of the plurality of application server instances using the different client-side ORB coupled to a server-side ORB of the different application server instance (col 7 lines 21-24, wherein the request is directed to the server).
10. Regarding claims 6 and 10-11, they are rejected for the same reasons as claims 1 and 5 above.
11. Regarding claims 12, 16, 17, and 21, they are the method and computer accessible medium claims of claims 1 and 5 above. Therefore, they are rejected for the same reasons as claims 1 and 5 above.
12. Claims 2-4, 7-9, 13-15, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gigliotti et al. (US Pat No. 6,393,458) in view of Applicant's Admitted Prior Art (AAPA).

13. Regarding claim 2, Gigliotti does not teach that the access of a particular one of the plurality of application server instances via the selected client-side ORB is performed according to RMI-IIOP.

14. AAPA teaches that RMI allows objects on different computers to interact in a distributed network (pg 1 lines 10-13). AAPA also teaches that IIOP is a protocol that allows distributed programs written in different programming languages to communicate over the Internet (pg 2 lines 5-7).

15. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gigliotti to use RMI-IIOP. One would be motivated by the desire to apply the teachings of Gigliotti to distributed computed where the different computing nodes operate on different programming languages as indicated by Gigliotti.

16. Regarding claims 3-4, Gigliotti does not teach that the creation of a plurality of client-side ORBs and said selection of one of the plurality of client-side ORBs according to a load balancing scheme are performed by a Context Factory class, wherein the Context Factory class is a JNDI Factory Class.

17. AAPA teaches using JNDI to provide naming and directory functionality to applications written in the Java programming language (pg 2 lines 26-27).

18. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gigliotti by including the use of JNDI. One would be motivated by the desire to access a variety of services (new, emerging, already deployed) in a common way as indicated by AAPA (pg 2 lines 29-30).

19. Regarding claims 7-9, they are rejected for the same reasons as claims 2-4 above.

20. Regarding claims 13-15, and 18-20, they are the method and computer accessible medium claims of claims 2-4 above. Therefore, they are rejected for the same reasons as claims 2-4 above.

Response to Arguments

21. Applicant's arguments filed 06/05/2007 have been fully considered but they are not persuasive.

22. Applicant argues: "In regard to claim 1, contrary to the Examiner's assertion, Gigliotti does not teach or suggest one or more client computer systems configured to implement one or more clients of the application server, wherein each client is configured to: create a plurality of client-side Object Request Brokers (ORBs), wherein each client-side ORB is coupled to a server-side ORB of a different one of the plurality of application server instances."

23. Examiner disagrees. Fig 3 of Gigliotti clearly indicates multiple client computer systems connected to multiple load balancers with a plurality of client-side ORBs couple to a server-side ORB of a different one of the plurality of application server instances.

24. Applicant argues: "FIG. 3 of Gigliotti shows a plurality of "client objects" coupled to a plurality of "Server hosts", but does not show a plurality of client-side ORBs for each client object, wherein each client-side ORB for each client is coupled to a server-side ORB of a different one of the plurality of application server instances. In contrast, Gigliotti only teaches that each 'client object' may be an ORB. In the description of FIG. 3, beginning at col. 6, line 3, Gigliotti does not teach or suggest anything like each client creating a plurality of client-side Object Request Brokers (ORBs), wherein each client-side ORB is coupled to a server-side ORB of a different one of the plurality of application server instances."

25. Examiner disagrees. Fig 3 clearly indicates a plurality of client-side ORBs for each client object since each client object is coupled with it's own load balancer which in turn uses a client-side ORB to couple to a server-side ORB. In addition, Gigliotti does teach that any communication between two different machines is utilizes ORB (col 3 lines 56-64). Therefore, one of ordinary skill in the art would have known that each line, in Fig 3, connecting client 42 to server 44, requires an ORB at both ends.

26. Applicant argues: "In further regard to claim 1, contrary to the Examiner's assertion, Gigliotti does not teach or suggest wherein each client is configured to select one of the plurality of client-side ORBs according to a load balancing scheme in response to a request to access the application server. The Examiner cites Gigliotti, col. 6, lines 37-39, in support of this assertion, and states "wherein a load balancer

determines a balanced distribution". However, nowhere does Gigliotti teach or suggest each client selecting one of the plurality of client-side ORBs according to a load balancing scheme in response to a request to access the application server. Nowhere does Gigliotti teach or suggest each client creating a plurality of client-side ORBs on a client system, and nowhere does Gigliotti teach or suggest each client selecting one of the [created] plurality of client-side ORBs according to a load balancing scheme."

27. Examiner disagrees. The client object coupled to the load balancer of Gigliotti is equivalent to the client as claimed by Applicant since the load balancer components are part of Client 42 (Fig 3 and col 6 lines 3-10).

28. Applicant argues: "In Gigliotti's system "[t]he client publishes an event which is received by only one of the plurality of load balancers." The load balancer would then select a server instance from among a plurality of server instances. In other words, Gigliotti's system using ORBs, a server-side ORB would be selected by a load balancer in response to an event generated by a client. However, even if a "client" in Gigliotti's system has more than one client-side ORB, Gigliotti's system does not select from among a plurality of client-side ORBs to do load balancing. In Gigliotti's system, instead, a load balancer selects among a plurality of server-side ORBs corresponding to the server instances. The selected server-side ORB would then communicate with the client-side ORB associated with the client."

29. Examiner disagrees. Gigliotti does select a server based on load readings. However, it is inherent that the corresponding client-side ORB for the selected host be

chosen. Furthermore, a client-side load balancer that is coupled to each client that selects from among the servers reads on the claimed invention.

30. Applicant argues: "The distinctions between Gigliotti and claim 1 of the instant application is clear. Gigliotti does not teach or suggest each client creating a plurality of client-side Object Request Brokers (ORBs), wherein each client-side ORB is coupled to a server-side ORB of a different one of the plurality of application server instances, and selecting one of the plurality of client-side ORBs according to a load balancing scheme in response to a request to access the application server. Instead, Gigliotti teaches a client generating an event, a load balancer receiving the event, and in response to the event, the load balancer selecting from among a plurality of server-side ORBs."

31. Examiner disagrees. At some point, Gigliotti's invention must create a plurality of client-side Object Request Brokers (ORBs) in order to communicate with the servers. Fig 3 clearly indicates that each client can be coupled to a single load balancer which is then coupled to each of the servers. Gigliotti's invention also must select one of the plurality of client-side ORBs according to a load balancing scheme in response to a request to access the application server.

Conclusion

32. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012. The examiner can normally be reached on Mon-Thurs, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2195

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW


MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100